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ACTIVITY OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

Permanent Committee. — The Permanent Committee of the Institute held its summer meeting on June 6. In the absence of the President, H. E. Baron Acerbo, now in the army, and also of the Vice-President, Mr J. Clyde Marquis, engaged on a mission to his Government, the reunion was presided over by Sr. Bilbao, representative of Spain and oldest Delegate at the Institute.

The Delegates of the following countries participated at the meeting: Germany, Argentina, Bulgaria, Colombia, Denmark, Spain, the United States of America and Possessions, Finland, Hungary, Iran, Irish Free State, Italy and Colonies, Japan, Paraguay, Peru, Rumania, Switzerland, Turkey, Uruguay, Venezuela.

The Permanent Committee discussed various questions of an administrative order and approved, *inter alia*, a proposition advanced by the Secretary General relative to a complete history of the activities of the Institute in recent years which would also document the results achieved.

In this moment of waiting and change towards a period which will undoubtedly be marked by extreme dynamism, the Secretary General considered it advisable to assemble these results in order that the Institute, when called upon to play a predominant role in the future work of reconstruction, may in this way be in a position to present an exact report on its work which will give the Governments and Organizations concerned a precise indication of its possibilities and capabilities.

The Permanent Committee stressed the importance of this task which will thus bring out in their true light the efforts and work accomplished to the benefit of world agriculture and will enable both Governments and scientific agricultural circles to judge on a solid basis the future program of work of the International Institute of Agriculture.

As regards scientific collaboration with the International Forestry Centre, created within the compass of the Institute, the Permanent Committee adopted the proposal to closely coordinate the data on the work now being prepared by the Institute on *Statistics on world trade in forestry products* with those for the monograph to be published by the International Forestry Centre on *World trade in timber from 1925 to 1938.*

International Forestry Centre. — In the April number of this year, a fairly extensive review was given of the activities of the International Forestry Centre and its program of work.

The second number of the Review 'Intersylva' (April, 1941) has been published and comprises four original articles: the first regards *Work of the Weissfluhjoch Station of the Swiss Commission for studies on snow and avalanches*; the second is entitled *Danish timber budget* and the third *Nature protection in the forests of Sweden*, while in the fourth, a review is given of *International tasks in forestry documentation*. These articles contain photographic reproductions, tables, diagrams, etc.

This number of Intersylva naturally continues the section entitled *Forest Science* and is a review of publications on forestry throughout the world, mentioning the results of research work and studies of interest in view of their importance from an international viewpoint and their novelty from the scientific standpoint. In this number of Intersylva, the chapter in question treats on material which arrived at the International Forestry Centre during the period of June 1 to December 30, 1941. The Review also contains the usual *Miscellaneous Information* chapter.

The 3rd number of the Review is in the course of preparation and will comprise for the first time a section on 'Progress in forestry'.

The Centre anticipates the early publication of two monographs, one on *Road plantations* and the other on *International trade in timber from 1925 to 1938*. Other monographs and studies are in preparation.

BOOKS PRESENTED TO THE LIBRARY OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

Bărbat, Al. Studiul economic al satului Drăgus-Făgăras. Bucureşti, Impr. naţională, 1941. 193 p. [Economic study on the rural centre of Drăgus-Făgăraş].

Bernardini, L. La biochimica nell'industria del tabacco. Parte prima. La foglia raccolta al campo. Roma, Tip. F. Centenari, 1941. 138 p. (Ente nazionale per il tabacco).

Billbäck, B. Frukt och bär; vägledning i fruktodling. Stockholm, Kooperativa förbundets bokförlag, [1941]. 244 p. [Fruits and berries; manual on fruit cultivation].

Böhler, E. und H. Dütschler. Allgemeine Grundsätze schweizerischer Wirtschaftspolitik. Zürich, Institut für Wirtschaftsforschung, Eidgenössische Technische Hochschule, 1940, 79 p.

Brizi, U. Malattie delle piante agrarie. [2ª edizione, quasi interamente rifatta]; a cura de l'Anonima grandine di Milano. Bergamo, Istituto italiano d'arti grafiche, 1941. VIII, 719 p.

Buschlinger, W. Entwicklungstendenzen in der Kreditpolitik der gewerblichen Kreditgenossenschaften seit der Stabilisierung. Stuttgart, W. Kohlhammer, 1940. 69 p. (Veröffentlichungen des Institus für Genossenschaftswesen an der Johann Wolfgang Goethe Universität. Frankfurt am Main. Heft 22).

INTERNATIONAL BULLETIN
OF PLANT PROTECTION

1941 Nos. 7 & 8

DISCOVERIES AND CURRENT EVENTS *

ARGENTINE REPUBLIC.

Tulip Fire (*Botrytis tulipae*), a Disease New to the Country †

Mme Maria D. Campi of the Phytopathological Division of the Ministry of Agriculture has discovered that *Botrytis tulipae* (Lib.) Hopk. has made its appearance in the country for the first time.

The parasite was obtained in pure culture and utilized for the experimental reproduction of the disease it causes on the tulip. Typical lesions were produced on the leaves, stalks and bulbs. From the studies carried out, it was concluded that:—

(*a*) When the soil is inoculated with the mycelium and the sclerotia of the fungus, the bulbs are attacked; resting spores formed in the bulbs enable the disease to be transmitted from one crop to another;

(*b*) The fungus attacks the aerial parts of the plant and under the right conditions of humidity, produces spores on the lesions; the eventual dispersion of these spores causes secondary infection which may determine the loss or depreciation of the flower.

The following general system of control is advocated:—

(1) Disinfection of the soil and planting boxes;

(2) Disinfection of the bulbs after removing the old scales or those showing sclerotia;

(3) Maintain moisture conditions at the minimum necessary;

(4) Removal of the parts of plants or plants showing symptoms of the disease.

BELGIUM.

Predators of the Colorado Beetle (*Leptinotarsa decemlineata*) §

During the month of July, 1940 in a small focus of *Leptinotarsa decemlineata* a larva of the stink bug *Picromerus bidens* L. was found feeding on a larva of the Colorado beetle. Subsequently, a fair number of adults of this

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the official correspondent of the Institute, Mr. JUAN B. MARCHIONATTO, Agricultural Engineer, Director of 'Sanidad Vegetal', Ministry of Agriculture, Buenos Aires, Argentine Republic.

§ Communication from the official correspondent of the Institute, Prof. R. MAYNÉ, Director of the State Station of Entomology, Gembloux, Belgium.

bug and also related species were collected with a view to studying their behaviour in relation to the Colorado beetle.

Attention was concentrated on *P. bidens* and *Troilus* (*Podisus*) *luridus* Faf. both belonging to the subfamily Asopinae.

Up to date, from the studies made, these two species appear to be the best aids in the biological control of the potato pest.

From laboratory experiments and observations in the field the following facts have been established:—

(1) *Picromerus bidens* L. lives in cool and moist surroundings where there is a dense growth of various plants; its localization appears to depend on the abondance of insects on which it feeds. It is carnivorous. It likes prey to have a smooth skin, be turgescent and slow-moving; the Colorado beetle larva may be considered as one of the forms most suited for its diet. Although this species hunts its food, relatively speaking, it does not cover a wide range. High temperature and humidity stimulate its activity. In Belgium, the eggs hibernate and hatch in spring, the adults appear during the first fortnight of August and die in the first cold days of autumn. Pairing takes place immediately after the change into imago.

(2) *Troilus* (*Podisus*) *luridus* Fab. feeds more or less like *P. bidens*. It prefers a moist atmosphere. It is a insect less mobile than the above-mentioned species. The adults appear at the beginning of September and hibernate. Egg-laying takes place in spring.

Further studies will show the biological conditions and behaviour of the Asopinae in relation to the different prey attacked within their possible limits of dispersion. It will then be possible to determine the conomic value of each species and the practical means of their utilization in the biological control of the Colorado beetle.

RUMANIA.

Downy Mildew of the Vine during 1940 *

The following observations refer to the Rumania existing before territorial changes.

Owing to the climatic conditions, the downy mildew of the vine (*Plasmopara viticola*) was very widespread last year, infection was extremely intensive, the extent of the damage being among the highest reported in Rumania.

The incessant rains of May and June prevented the majority of the wine-growers to sulphate in time, the consequence of this ommission being the total destruction of the grape harvest in numerous regions of the country. In 1940, the mildew appeared not only on the leaves and bunches but also on the tendrils and young shoots, stunting their growth. Consequently, the position regarding the production of the following season is also serious.

* Communication from the official correspondent of the Institute, Prof. Dr. Tr. SĂVULESCU, Chief of the Phytopathological Section, Agricultural Research Institute of Rumania, Bucharest, Rumania.

The following tables show the exceptional meteorological conditions of the spring and beginning of summer in 1940 which facilitated the intensive invasion of the fungus.

Meteorological observations for April, 1940.

Province	Temperature	Precipitation		
	Deviation from average normal for the month	Rainfall in mm.	Normal rainfall in mm.	Difference in %
Maramuresh	−0.52°	43.3	61.7	−30
Crișana	−0.33°	35.4	59.8	−48
Banat	−0.17°	46.0	63.8	−28
Transylvania	−0.56°	39.0	54.3	−28
Lesser Wallachia	−0.02°	59.1	54.0	+ 9
Greater Wallachia	−0.53°	64.1	48.0	+34
Dobruja	−1.29°	61.2	33.6	+82
Moldavia	−1.56°	65.5	45.2	+45
Bukovina	−1.40°	53.4	52.1	+ 2
Bessarabia	−1.40°	54.3	29.8	+82
Average or total	−0.91°	55.1	48.4	+14

Remarks. The average temperatures fluctuated, with small variations, around normal, without exceeding or equalling, however, the normal figure in any province. For the whole country, the average deviation from normal was 0.91° C.

On the whole, rainfall was estimated at 6.7 mm. or 14 per cent. higher than normal.

Of special interest as regards wine-growing are the rainfall figures for the hilly regions.

Area	Effective rainfall in mm.	Normal rainfall of the region in mm.
Someș-Tisa	39	56
Criș-Tisa	33	64
Mureș-Tisa	29	52
Bega-Tisa	30	70
Timișul	42	62
Jiul	76	59
Oltul	54	67
Argeșul	64	65
Ialomița	74	55
Siretul	68	46
Pruntul	62	42
Dunărea	64	50
Nistrul	65	32
M. Neagră	77	37
Average	56	50

Remarks. With the exception of a few regions where rainfall was below normal, in the hill regions, an average increase of 6 mm. above normal was reported for April.

Meteorological observations for May, 1940.

Province	Temperature	Precipitation		
	Deviation from average normal for the month	Rainfall in mm.	Normal rainfall in mm.	Difference in %
Maramuresh	−2.57°	124.8	90.3	+ 38
Crişana	−2.60°	116.2	77.6	+ 50
Banat	−2.37°	79.2	87.0	+ 9
Transylvania	−2.64°	91.8	81.0	+ 13
Lesser Wallachia	−2.27°	88.1	76.7	+ 15
Greater Wallachia	−2.43°	109.7	70.8	+ 51
Dobruja	−2.29°	72.7	44.9	+ 62
Moldavia	−2.77°	143.9	68.7	+ 109
Bukovina	−2.75°	148.3	97.5	+ 52
Bessarabia	−3.58°.	92.6	46.9	+ 97
Average or total	−2.58°	106.0	71.1	+ 49

Remarks. May was cold and wet. Throughout the country, the average temperature was below normal for that month; the average deviation was −2.58 per cent., with extremes of −2.27° in Lesser Wallachia and −3.35° in Bessarabia.

For the whole country, excepting the Banat region, the rainfall was 34.9 mm., *i.e.*, 4 per cent. higher than normal with extremes of 15 per cent. in Lesser Wallachia and 109 per cent. in Moldavia.

Hill region. May 1940.

Area	Effective rainfall in mm.	Normal rainfall of the region in mm.
Someş-Tisa	106	79
Criş-Tisa	121	84
Mureş-Tisa	86	77
Bega-Tisa	10	83
Timişul	71	80
Jiul	80	82
Oltul	108	89
Argeşul	95	95
Jalomiţa	82	86
Siretul	154	70
Prutul	113	60
Dunărea	82	70
Nistrul	74	59
M. Neagră	59	51
Average	109	73

Remarks. The increase in rainfall varied between 6 mm. in the Black Sea basin and 84 mm. in the Siret basin. On an average, the increase was 36 mm. above the normal figures for the month and the region.

Meteorological observations for June, 1940.

Province	Temperature	Precipitation		
	Deviation from average normal for the month	Rainfall in mm.	Normal rainfall in mm.	Difference in %
Maramuresh	−0.92°	145.5	116.4	+ 25
Crișana	−0.55°	166.7	96.6	+ 67
Banat	−0.80°	168.7	97.7	+ 72
Transylvania	−0.90°	161.3	110.8	+ 45
Lesser Wallachia	−0.65°	254.7	80.7	+214
Greater Wallachia	−0.73°	162.9	92.5	+ 75
Dobruja	+0.10°	68.1	59.7	+ 14
Bukovina	−0.66°	146.2	123.6	+ 18
Moldavia	−0.66°	146.4	83.8	+ 74
Average or total	—	159.6	88.1	+ 81

Remarks. It was during this month that infection was greatest. Temperature was close to normal, though never exceeding normal, with the exception of Dobruja (+ 0.10°). Deviations varied between −0.55° in Crișana and −0.92° in Maramuresh. Precipitations were excessively abundant, showing an increase of 71.5 mm., *i. e.*, above normal. The highest increase was reported in Lesser Wallachia, amounting to 214 per cent.

Hill region. June, 1940.

Area	Effective rainfall in mm.	Normal rainfall of the region in mm.
Someș-Tisa	166	105
Criș-Tisa	156	107
Mureș-Tisa	156	102
Bega-Tisa	152	102
Timișul	141	95
Jiul	267	80
Oltul	217	98
Argeșul	144	111
Ialomița	174	109
Siretul	159	86
Prutul	108	75
Dunărea	55	78
M. Neagră	88	66
Average	159	89

Remarks. Subnormal rainfall only occurred in the Danube Basin (–23 mm.). In the other regions, rainfall was above normal with increases varying between 22 mm. in the Black Sea Basin and 167 mm. in the Jiul Basin, the average for the entire hill region being 70 mm.

Meteorological observations for July, 1940.

Province	Temperature	Precipitation		
	Deviation from average normal for the month	Rainfall in mm.	Normal rainfall in mm.	Difference in %
Maramuresh	–0.85°	87.6	104.8	–17
Crișana	–1.43°	67.1	78.2	–14
Banat	–0.87°	49.8	75.6	–34
Transylvania	–0.30°	63.2	99.1	–36
Lesser Wallachia	+0.40°	45.8	58.3	–21
Grande Wallachia	–0.27°	63.4	67.2	– 6
Dobruja	+0.60°	46.3	51.5	–10
Bukovina	–0.23°	53.1	67.8	–22
Moldavia	–0.23°	100.6	116.5	–14
Average or total	–0.31°	59.3	70.1	–15

Remarks. In Lesser Wallachia and Dobruja, the average temperatures were slightly higher than normal. In the other provinces, they were below normal, deviations varying from 0.23° in Moldavia and Bukovina and —1.43° in Crișana. For the whole country, the difference amounted to —0.31° below normal. Rainfall was lower than normal in all the provinces of the country. For the whole country, the decrease was 10.8 mm. or 15 per cent. under normal, with deviations varying between 6 and 36 per cent.

Hill region. July, 1940.

Area	Effectiee rainfall in mm.	Normal rainfall of the region in mm.
Someș-Tisa	78	95
Criș-Tisa	87	87
Mureș-Tisa	46	93
Bega-Tisa	49	79
Timișul	37	70
Jiul	26	62
Oltul	59	74
Argeșul	61	81
Ialomița	56	74
Siretul	52	68
Prutul	62	65
Dunărea	38	58
M. Neagră	97	60
Average	56	72

Remarks. Rainfall was higher than normal in the Black Sea Basin. In the other areas, there was a decrease varying between 3-5 mm. in the Criș-Tisa and Prut Basins and 47 mm. in the Mureș-Tisa Basin, with an average of 24 mm.

* * *

According to the information received from the different wine-growing regions, the development of the powdery mildew of the vine was as follows:

In the Drăgășani wine-growing region, Vâlcea District, the first attack was observed on May 27, the second on June 4, the third on June 12, the fourth on June 20; the other attacks in June and July followed on so closely that it was impossible to distinguish each separately. The last attack of vine mildew in this region was reported as taking place on August 9. The losses suffered by the viticulturists in the Drăgășani region caused by mildew attack alone amounted to 25 per cent. of the crop, while the small-scale growers, owing to lack of copper sulphate, lost up to 80 per cent. The varieties most heavily attacked and showing the greatest drop in production were: ' Perla de Csaba', ' Chasselas ', ' Ottonel'; the varieties ' Crâmpoșia', ' Gordan', ' Cabernet', ' Pinot' and ' Riesling' showed greater resistance.

In the Istrița region, Buzău District, up to August, nineteen attacks of mildew occurred. The first infection was observed between May 23 and 25. The most frequent and serious attacks took place between June 14 and 30 when eight periods of invasion followed and overlapped each other. The latter caused the most damage as they occurred at the flowering season of the vine. The seven invasions which followed at very brief intervals during the first half of July were also very serious. The most severe attack in this region took place after the hail storm of June 23, destroying 20-25 per cent. of the leaves and grapes.

In the plain where the Istrița nursery is located, the losses due to mildew in 1940 attain 70-80 per cent., and in some cases, the crop was an entire loss. The varieties which showed the greatest susceptibility were: ' Perla de Csaba', ' Angévine Oberlin', ' Madeleine Angévine', ' Hamburg Muscatel', ' Afuz-Ali', ' Tămâioasă românească', ' Chasselas doré', ' Chasselas Napoléon', ' Băbeasca' and ' Grasa'; the varieties ' Aligoté', ' Pinot', ' Cabernet', ' Fetească', ' Gordan', ' Riesling', ' Crâmpoșia' and ' Băsicata' showed greater resistance.

In the Pietroasele region, Buzău District, 14 periods of infection were reported with certainty though most probably, there were more owing to the unusual climatic conditions of the year.

Certain periods of infestation overlapped and consequently, it was impossible to distinguish between them. Fourteen, however, were definitely identified. The first attack took place between May 17 and 18, although the disease did not make its appearance until May 29. The second attack occurred on May 23-24 and the disease was observed on June 9. The third invasion occurred on June 2-3 and the conidiophora appeared on June 13. The fourth attack happened on June 18 and was caused by the infection of June 5-6; the leaves were affected and also, for the first time, the bunches. The fifth attack, reported on June 26, was fairly severe, attacking both the leaves and the grapes. The sixth attack probably

took place on the night of June 20-21, following a heavy rain storm and its appearance was noted on June 30. The eighth attack, very severe, probably occurred on June 30, being observed on July 7. The intensity of the sixth, seventh and eight attacks was so severe that the crop of all untreated vineyards was entirely destroyed. The ninth period of infection appeared on July 6 and was observed on July 12 in the form of sterile oily spots. The tenth attack, reported on July 15, was facilitated by a fall of rain on July 11; the eleventh attack (July 31) only affected the extremities of the young shoots and was observed on August 5. The twelfth attack was facilitated by the rain of August 18 and made its appearance on August 28, the thirteenth also benefited through the rainfall of August 18 and manifested itself on September 3.

The last three periods of infestation were of no practical importance, as only the tips of the shoots were affected by mildew; these were removed.

In the region where the experiment vineyard of Pietroasele is situated, the varieties showing the greatest susceptibility to mildew infection were: ' Mustoasa', ' Chasselas', ' Braghina', ' Afuz-Ali', ' Crâmpoșia', ' Tămâioasă românească', ' Galbenă', ' Negru vârtos', ' Negru de Csaba', ' Coarna albă', ' Coarna neagră' and ' Grasa'. The varieties ' Fetească albă', ' Selection Carrière', ' Ottenol', ' Cabernet Sauvignon', ' Cinsaut', ' Pinot' and ' Riesling' were more resistant.

In the Prahova District at Valea Călugărească, according to observations made at the vineyard of the School of Viticulture, from May up to mid August, there were 38 attacks. Owing to the continual rains which prevented sulphating being carried out at the proper period, the entire crop was affected. As seen from the development of the vines during the growth period, the crop of the following season will probably be unsatisfactory. In general, in this region, losses amounted to 70-80 per cent. and even 100 per cent. In most cases, the damage caused was 90-100 per cent. In this region, the varieties most severely attacked were: ' Chasselas doré', ' Muscat-Ottenol', ' Perla de Csaba', ' Dattier de Beyrouth', ' Pinot', ' Aligoté', ' Traminer' and ' Fetească', while the varieties ' Riesling', ' Selection Carrière', ' Galbenă', ' Cabernet Sauvignon' and ' Cinsaut' showed better resistance.

In the Huși region of the Fălciu District, six successive and distinct attacks of mildew were reported. The losses suffered by the wine-growers amounted to about 80 per cent. of normal production. The varieties ' Perla de Csaba', ' Chasselas', ' Frâncusa' and ' Muscat-Ottenol' were the most severely attacked, while the varieties ' Fetească', ' Zghiară', ' Galbenă' and ' Riesling' were damaged to a lesser extent.

In the Odobești-Panciu region of the Putna District, 5 severe, distinct attacks of mildew as well as three intermediary invasions were reported. The total losses suffered by the wine-growers of this region attained 60 per cent. of the normal production. The most susceptible varieties were: ' Chasselas Rose', ' Chasselas doré', ' Chasselas Napoléon', ' Tămâioasă românească', ' Afuz-Ali', and ' Galbenă; the varieties ' Aligoté', ' Plavăie', ' Cabernet Sauvignon', ' Fetească albă and ' Traminer' proved to be less susceptible; the most resitant varieties were ' Sauvignon' and ' Crăcana',

In the Murfatlar region in Dobruja, four attacks attaining an intensity formerly unknown in this region were reported. The losses were as much as 90 per cent. of the normal crop. The most severely attacked varieties were: 'Muscat-Ottenol', 'White Pinot', 'Perla de Csaba' and 'Madeleine Angévine'; the varieties 'Italian Riesling', 'Trolinger', 'Grey Pinot', 'Malvoisie' and 'Hamburg Muscatel' suffered less damage.

In the Târnava region in Transylvania, according to the observations made by the Mediaș School of Agriculture, there were 22 attacks, some more severe than others, between May 29 and August 1. Infection was severest during the flowering season; the damage reported amounted to 70 per cent. The varieties most severely attacked were 'Muscat-Ottenol', 'Red Sylvaner' and 'Green Sylvaner'. The varieties 'Fetească', 'Royal Fetească' and 'Italian Riesling' proved more resistant.

In the Dioseg-Bihor region, at least seven distinct attacks of an intensity previously unknown in this region, were reported. Losses amounted to over 60 per cent. of the normal crop. The varieties suffering the most damage were 'Muscat-Ottenol', 'Tămâioasă', 'Chasselas', 'Afuz-Ali', 'Muscat Maderat' and 'Perla de Csaba', while the varieties 'Riesling', 'Furmint', 'Bacator', 'Galbenă Cadarca', 'Traminer', 'Sylvaner' and 'Ardeleana' were attacked to a lesser extent.

In general, the mildew infestation in 1940 was so very severe that it caused the destruction of the entire crop in some regions and jeopardized not only the crop of the next season but also the existence of the vines themselves. In the Valea Călugărească region, old experienced wine-growers affirm that they have never known such a violent invasion of vine mildew and compare the losses suffered with those incurred with the first appearance of phylloxera and mildew in Rumania.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — The Station for research on the Colorado beetle [*Leptinotarsa decemlineata*] at Kruft [see this *Bulletin*, 1941, No. 1, p. 7] has recommenced activities as from April, 18, 1941. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin, Anfang Mai 1941, 21. Jahrg., Nr. 5, S. 38).

Germany (Alsace). — A Decree of March 29, 1941 relative to bee protection prohibits the use of arsenical preparations on fruit trees and other horticultural plants and field crops when in flower, exception being made for vines, potatoes and asparagus in the case of liquid but not dust preparations. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Mai 1941, Bd. XIII, Nr. 4, S. 169).

Germany (Protectorate of Bohemia and Moravia). — Decree No. 422, dated October 10, 1940, modified the regulations regarding the uses of hydrocyanic acid gas, ethylene oxide and chloropicrin.

The sanitary regulations and precautionary measures forming the second part of Decree No. 176 of June 26, 1936 issued in the former Czechoslovakia are substituted by other regulations for the protection of the public against any possible danger from the use of these toxic gases. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. April 1941, Bd. XIII, Nr. 3, S. 116-122).

*** Decree No. 89 of December 5, 1940 comprises new provisions relative to the supervision of and trade in the products intended for the protection of plants and plant products against noxious pests.

Article I treats on the nature of the different control measures, supervision of their efficacy, preparation and packing.

The control measures officially authorized are registered at the Ministry of Agriculture.

Article II regards poisonous preparations dangerous to the general health, with special reference to the precautionary measures to be adopted.

Article III deals with the working of the supervisory bodies: the Plant Protection Organization at Prague for Bohemia and the similar organization at Brünn for Moravia.

This Decree will come into force six months after its promulgation. (*Ibid.*, S. 122-130).

*** By Notification of March 6, 1941, it is established that nursery products may only be placed on the market if the nursery in question is under official supervision. Only those persons who have been granted the necessary permit will be allowed to hold nurseries. (*Ibid.*, 130-131).

Germany (Hesse). — By a Decree of June 22, 1938, the control of the corn weevil [*Calandra granaria*] has been made compulsory for all persons possessing stocks of grain or engaged in the processing of same into food or fodder products. They will be required to carry out the instructions given them by the Plant Protection Service. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Mai 1941, Nd. XIII, Nr. 4, S. 169-170).

Germany (Lorraine). — The offices of the Plant Protection Service under civil administration have been installed at Kaiserslautern, Mühlstrasse 16. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin, Anfang Mai 1941, 21. Jahrg., Nr. 5, S. 40).

*** A Decree of April 26, 1941 relative to the sale of toxic preparations employed in the control of plant pests comprises provisions similar to those adopted in the Reich as according to Police Ordinance of February 13, 1940 [see this *Bulletin*, 1940, No. 6, pp. 121-122]. (*Ibid.*, Anfang Juni 1941, Nr. 6, S. 48).

Germany (Prussia). — By Decree of May 22, 1941 the control of the 'Rapsglanzkäfer' [*Meligethes aeneus*] is made compulsory in the region in the circumscription of Oldenburg, Sleswig-Holstein where colza and rape are grown on a commercial scale. The apparatus required for control operations, supplied gratis to the growers concerned, will be utilized with due care and returned in good condition. This Decree remains in force up to June 30, 1941. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Juni 1941, Bd. XIII, Nr. 5, S. 208).

Argentine Republic. — The Ministerial Resolution No. 14.644 of May 27, 1940 regulates the transport of cottonseed in the zones infested with the pink bollworm (*Platyedra gossypiella*) as so considered by Decree No. 37.841, dated August 5, 1939 [see this *Bulletin*, 1939, No. 12, p. 294]. (*Gaceta Algodonera*, Buenos Aires, junio 30 de 1930, año XVII, nº. 197, págs. 15 y 16).

*** Decree No. 85.584 of March 1, 1941 declares as 'plaga vegetal' the leguminous plant *Prosopis ruscifolia*, commonly known as 'vinal'. (*Boletín Oficial de la República Argentina*, Buenos Aires, 13 de marzo de 1941, año XLIX, núm. 13.972, pág. 3).

Belgium. — By Decree of May 15, 1941, the capture of sparrows by means of draw-nets ('tirasse') only, is authorised up to August 31, 1941 inclusive, throughout the country subject to certain conditions. (*Moniteur Belge*, Bruxelles, 30 mai 1941, nº 150, p. 3812-3813).

United States of America. — It has been found as a result of further experiments with treatments for freeing nursery stock and potted plants from the immature stages of the Japanese beetle [*Popillia japonica*], that 2 ½ pounds of methyl bromide per 1,000 cubic feet applied for a period of 3 ½ hours at a temperature of not less than 57° F., or for 3 hours at not less than 60° F., is sufficient to kill such larvae.

The Japanese beetle administrative instructions have been accordingly revised on April 11, 1941 to authorize the use of such treatments. (*B. E. P. Q. 499, Supplement No. 1 — Third revision*, [Washington, D. C.], 1941, 2 pp. [mimeographed]).

Italy. — A Ministerial Decree, dated January 31, 1941, orders the destruction of phylloxera-infested vines and also of disease-free vines in the protection zone of the phylloxera foci discovered during the year 1940 in the Castelli Romani and also in the Campagna romana. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, Roma, 21 maggio 1941, anno XIII, n. 15, pp. 876-877).

*** By a Ministerial Decree of March 26, 1941 a competition was opened for the award of eleven scholarships for advanced study at the Royal Institutes for scientific research and experimentation in plant pathology and agricultural entomology and at the Royal Observatories for plant diseases. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 8 maggio 1941, anno 82º, n. 109, p. 1804).

*** By Ministerial Decree of May 26, 1941, the territories of all the communes of the Province of Avellino are declared infested with grape phylloxera. (*Ibid*, 3 giugno 1941, n. 129, p. 2161).

*** Another Ministerial Decree of the same date declares that the commune of Armento, Province of Potenza, is also infested with grape phylloxera. (*Ibid.*).

Peru. — Owing to the presence of the pink cotton bollworm (*Pectinophora* [*Platyedra*] *gossypiella*) in the Province of Manabí in the neighbouring Republic of Ecuador, a Resolution of January 27, 1941 prohibited all importation whatsoever across the Ecuador frontier into Peru of unginned cotton, cottonseed, press-cake and fibre.

At the same time direct transit of trucks or other vehicles from Ecuador into Peru through Aguas Verdes-Huaquillas was prohibited.

The customs officers on the Ecuador frontier are to maintain most strictly the aforesaid regulations and also to inspect carefully all lorries or trucks arriving at the frontier; the said officers will confiscate and burn all products, the import of which is prohibited according to the Resolution in question.

The transport of unginned cotton, cottonseed, press-cake and cotton fibre from Ecuador either by boat or by planes stopping in Peru is prohibited.

Cotton cultivation in the littoral province of Tumbes is also prohibited. The cotton plantations in the Tumbes Valley and in the Quebrada del Máncora as well as cotton plants of the Pima variety and other cotton plants growing wild will be destroyed by the Piura ' Brigada de Sanidad Vegetal '. (*La Vida Agrícola*, Lima (Perú), febrero 1º. de 1941, vol. XVIII, No. 207, pág. [151]).

Rumania. — A Ministerial Decree of December 18, 1940 establishes that consignments of cut flowers to Arad, Timişoara, Bucharest, Constanţa, Sibin, Braşov, Brăila and Galaţi are exempt from the usual customs inspection at the frontier. The said consignments, instead of being inspected at the frontier customs office, will be examined at the local offices of the Phytosanitary Inspection Service operating in the aforesaid localities. (*Monitorul Oficial*, Partea I-a, Bucureşti, 8 Ianuarie 1941, Anul CIX, Nr. 6, pag. 98).

Switzerland (Fribourg Canton). — A Decree of May 21, 1940 lays down the provisions relative to the control of the Colorado beetle [*Leptinotarsa decemlineata*].

All persons who discover the beetle in question either in the adult, larval or egg stages are required to report same immediately to the communal deputy for Colorado beetle control, who, in turn, will communicate with the cantonal Station for crops and phytopathology.

The transport of beetles in any stage whatsoever is strictly prohibited.

The cantonal Station for crops and phytopathology is commissioned with the organization of Colorado beetle control in the Canton in agreement with the federal authorities.

Merchants engaged in the seed potato trade are required to keep an exact account of their operations, that is, they must give an account of all buying and selling operations and details on origin, consignee, variety and quantity of seed potatoes sold.

All potato growers must have the necessary means to protect his crops from the Colorado beetle. Control operations may be entrusted to specialized operators.

Arsenical preparations are only suitable for use on crops grown on a commercial scale. Special precautions have to be observed when employing arsenical products. Any ingestion of toxic salts will be avoided. All packing material must be destroyed.

The use of arsenical products on potato plants grown contiguous to vegetables or on truck crops (tomatoes, etc.) is strictly prohibited. Rotenone preparations which are not dangerous to man or domestic animals will be employed.

Preventive treatment which in some cases is advisable, is optional and entirely at the expense of the grower who will purchase the necessary products from the local trade. The cantonal Station for crops and phytopathology will, if requested, furnish useful information.

Control operations, ordered by the said Station, are carried out on foci and larvae. These operations are compulsory and can be executed with products supplied at a reduced price.

The Federation of the Agricultural Associations of the Fribourg Canton has been nominated as supply centre for the sale of products at reduced price to be used in the control of the Colorado beetle. (*Bulletin officiel des lois, décrets, arrêtées et autres actes publics du Gouvernement du Canton de Fribourg*, Fribourg, 1940, année 1940, 109ème vol., p. 79-82).

*** By Decree of December 20, 1940, as from January 1, 1941, poisoned wheat, freshly prepared, must be coloured green.

Only pharmacists and druggists are authorized to sell this grain.

As in the case of arsenical products employed in the control of plant pests, poisoned grain can only be sold in special containers, labelled in large red letters on a white ground ' Deadly Poison ' and a Caput mortuus.

Supervision of the trade in and use of poisoned grain is entrusted to the Cantonal Analytical Laboratory. (*Ibid.*, p. 117-118).

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